

Product datasheet for **RG217354**

DNA polymerase eta (POLH) (NM_006502) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNA polymerase eta (POLH) (NM_006502) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DNA polymerase eta
Synonyms:	RAD30; RAD30A; XP-V; XPV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>RG217354 representing NM_006502
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTACTGGACAGGATCGAGTGGTTGCTCTCGTGGACATGGACTGTTTTTTTGTTCAGTGGAGCAGC
 GGC AAAATCCTCATTGAGGAATAAACCTTGTCAGTTGTACAGTACAAATCATGGAAGGGTGGTGAAT
 AATTGCAGTGAGTTATGAAGCTCGTGCATTTGGAGTCACTAGAAGTATGTGGCAGATGATGCTAAGAAG
 TTATGTCCAGATCTTCTACTGGCACAAGTTCGTGAGTCCCGTGGGAAAGCTAACCTCACCAAGTACCGGG
 AAGCCAGTGTGAAGTATGAGGATAATGTCTCGTTTTGCTGTGATTGAACGTGCCAGCATTGATGAGGC
 TTACGTAGATCTGACCAGTGTGTACAAGAGAGACTACAAAAGCTACAAGGTGAGCCTATCTCGGCAGAC
 TTGTTGCCAAGCACTTACATTGAAGGGTGCCTCAAGGCCCTACAACGGCAGAAGAGACTGTTCCAGAAAG
 AGGGGATGCGAAAACAAGGCTTATTTCAATGGCTCGATTCTCTCAGATTGATAACCTCACCTCTCCAGA
 CCTGCAGCTCACCGTGGGAGCAGTGATTGTGGAGGAAATGAGAGCAGCCATAGAGAGGGAGACTGGTTTT
 CAGTGTTCAAGCTGGAATTTACACAATAAGGTCCTGGCAAAACTGGCCTGTGGACTAAACAAGCCCAACC
 GCCAAACCCTGGTTTACATGGGTGAGTCCACAGCTCTTCAGCCAAATGCCATTTCGCAAAATCCGTAG
 TCTTGGAGGAAAGCTAGGGGCTCTGTCATTGAGATCCTAGGGATAGAATACATGGGTGAACTGACCCAG
 TTCCTGAAATCCCAGCTCCAGAGTCATTTGGGAGAAGAATGGGTCTTGGCTATATGCCATGTGCCGAG
 GGATTGAACATGATCCAGTTAAACCCAGGCAACTACCCAAAACCTTGGCTGTAGTAAGAACTCCCAGG
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 AGACTGACTAAAGACCGAAATGATAATGACAGGGTAGCCACCCAGCTGGTTGTGAGCATTCTGTACAAG
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 CAGAAAGTTAAAGAAGCTTCGTTTCTCTTACTGCTCCACTCAGGCTCCCATGAGCAATTCACCAT
 CCAAGCCCTCATTACCTTTCAAACAGTCAAAGTACAGGAACTGAGCCCTTCTTAAGCAGAAAAGTCT
 GCTTCTAAAGCAGAAAACAGCTTAATAATCTTCAGTTTCTTCCCCCAACAAAACCCATGGTCCAACGT
 AAAGCATTACCAAACCTTTACCAACAGAGTATCCAGGGTGTGTCCCTGTTTGTGAAGGGGTGTCGAAGC
 TAGAAGAATCCTCTAAAGCAACTCCTGCAGAGATGGATTTGGCCACAACAGCCAAAGCATGCACGCCTC
 TTCAGTTCCAAATCTGTGCTGGAGGTGACTCAGAAAGCAACCCCAAATCCAAGTCTTCTAGCTGCTGAG
 GACCAAGTGCCCTGTGAGAAGTGTGGCTCCCTGGTACCGGTATGGGATATGCCAGAACACATGGACTATC
 ATTTTGCATTGGAGTTGCAGAAATCCTTTTGCAGCCCCACTCTTCAAACCCCAAGTGTGTTCTGCCGT
 ATCTCATCAAGGCAAAAGAAATCCCAAGAGCCCTTGGCCTGACTAATAAACGCCCCAGGCCTGAGGGC
 ATGCAACATTGGAATCATTTTTTAAGCCATTAACACAT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG217354 representing NM_006502
 Red=Cloning site Green=Tags(s)

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MATGQDRVVALVDMDCFFVQVEQRQNPFLRNKPCAVVQYKSWKGGGIIAVSYEARAFGVTRSMWADDAKK
LCPDLLLAQVRESRGKANLTKYREASVEVMEIMSRFAVIERASIDEAYVDLTSVAVQERLQKLGQGPISAD
LLPSTYIEGLPQGPTTAEETVQKEGMRKQGLFQWLDLQIDNLTSPDLQLTVGAVIVEEMRAAIERETGF
QCSAGISHNKVLAKLACGLNKPQRQTLVSHGSRVQLFSQMPPIRKIRSLGGKLGASVIEILGIEYMGELTQ
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RLTKDRNDNDRVATQLVVSIRVQGDKRLSSLRCCALTRYDAHKMSHDAFTVIKNCNTSGIQTWESPPLT
MLFLCATKFSASAPSSSDITSFLSSDPSSLPKVPVTSSEAKTQSGSPAVTATKKATTSLESFFQKAAER
QKYKEASLSSLTAPTQAPMSNSPSKPSLPFQTSQSTGTEPFQKQSLLLKQQLNNSVSSPQQNPWSNC
KALPNSLPTEYPGVCPVCEGVSKLEESSKATPAEMDLAHSQSMHASSASKSVLEVTQKATPNPSLLAAE
DQVPCEKCGSLVPVWDMPEHMDYHFALELQKSFLQPHSSNPQVVS AVSHQGRNPKSPLACTNKRPRPEG
MQTLESFFKPLTH
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006502

ORF Size: 2139 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_006502.3](#)

RefSeq Size: 3464 bp

RefSeq ORF: 2142 bp

Locus ID: 5429

UniProt ID: [Q9Y253](#)

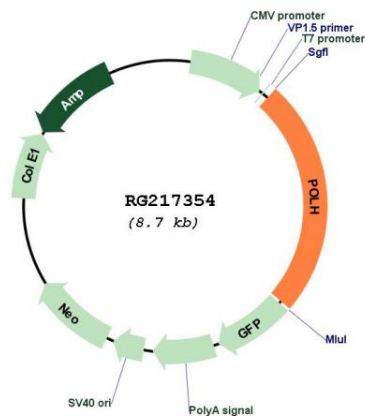
Cytogenetics: 6p21.1

Domains: IMS

Protein Families: Druggable Genome

Gene Summary: This gene encodes a member of the Y family of specialized DNA polymerases. It copies undamaged DNA with a lower fidelity than other DNA-directed polymerases. However, it accurately replicates UV-damaged DNA; when thymine dimers are present, this polymerase inserts the complementary nucleotides in the newly synthesized DNA, thereby bypassing the lesion and suppressing the mutagenic effect of UV-induced DNA damage. This polymerase is thought to be involved in hypermutation during immunoglobulin class switch recombination. Mutations in this gene result in XPV, a variant type of xeroderma pigmentosum. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2014]

Product images:



Circular map for RG217354